

DEPARTMENT OF THE ARMY
HEADQUARTERS U.S. ARMY FIELD ARTILLERY CENTER AND FORT SILL
FORT SILL, OKLAHOMA 73503

USAFACFS Regulation
No. 115-9

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Climatic, Hydrological, and Topographic Services
USAFACFS WEATHER SUPPORT

Supplementation of this regulation is prohibited, unless
specifically approved by Headquarters USAFACFS.

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*This regulation supersedes USAFACFS Reg 115-9, 27 May 1999.

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1. PURPOSE. This regulation consolidates and specifies--

a. Weather support provided by Operating Location-Alpha, 3d Weather Squadron(OL-A, 3 WS)to Fort Sill units, agencies, and activities.

b. Communications, logistics, and administrative support provided by Fort Sill to OL-A, 3 WS.

2. GENERAL.

a. Air Combat Command (ACC) has permanently stationed OL-A, 3 WS at Fort Sill with the mission of providing or arranging for direct weather service support requirements.

b. General policies and weather support responsibilities are outlined in AR 115-10/AFR 105-3.

c. Security Division, Directorate of Plans, Training and Mobilization (DPTM), USAFACFS, maintains staff cognizance over OL-A, 3 WS and coordinates direct weather support requirements.

d. Flight Chief, OL-A, 3 WS serves as the Staff Weather Noncommissioned Officer (SWNCO), for HQ USAFACFS, and is

responsible for providing or arranging weather support for Fort Sill.

3. REFERENCES. Air Force, ACC, Air Weather Service (AWS), and Air Force publications are available through the internet. Contact OL-A, 3 WS for specific web site addresses.

a. AR 95-1, 1 Sep 97, Army Aviation, General Provisions and Flight Regulations.

b. AFJI 15-157, Weather Support for the U.S. Army.

c. USAFACFS Reg 95-1, 25 Jun 95, General Provisions and Flight Regulations.

d. USAFACFS Reg 385-95, 12 Jul 93, Aircraft Accident Prevention Program.

e. USAFACFS Reg 115-10, Meteorological Messages/Operation of the USAFACFS Met Station.

f. USAFACFS Severe Weather OPLAN (SWOP).

g. USAFACFS Pam 385-95, 29 Apr 94, Aviation Pre-accident Plan (CRASH PLAN GUIDE).

h. Fort Sill Mobilization Plan.

i. AFMAN 10-206, U.S. Air Force Reporting Instructions.

j. AFMAN 15-124, Meteorological Codes.

k. ACCI 15-150, ACC Weather Support.

l. AFMAN 15-111, Surface Weather Observations.

4. APPLICABILITY. This directive is applicable to all Fort Sill units and activities. However, USAFACFS addresses upper air soundings generated by the USAFACFS Meteorological Station.

5. EXPLANATION OF TERMS.

a. Advisory. A special notice provided to supported agencies when a specified weather condition that could affect operations is occurring. Specific weather criteria for advisories are at appendix L.

b. Ceiling. The height above the earth's surface of the lowest cloud layer reported as broken or overcast or the vertical visibility into an indefinite ceiling.

c. Climate. A representation of how weather affects a specified area by the statistical collection of its weather conditions during a specified interval of time, usually several decades.

d. Flight Weather Briefing. A briefing from a weather forecaster to a pilot on weather conditions expected to affect a flight. AR 95-1 governs flight weather briefing procedures.

e. Terminal Weather Advisory. A particular type of advisory (see 5a above) designed to support aviation operations and not generally disseminated post-wide.

f. Magnetic Winds. The direction, with respect to magnetic north, from which the wind is blowing. The declination of magnetic north is plus 7.4 degrees east of true north at Fort Sill, rounded to the nearest whole 10 degree increment in weather data. Surface wind data is locally disseminated as magnetic winds.

g. Mean Sea Level (MSL). The average height of the sea surface over the globe. MSL is a reference surface in meteorology for atmospheric work. In aviation it is the level above which altitude is measured by a pressure altimeter. Henry Post Army Airfield (AAF) field elevation is 1,188 feet MSL.

h. Prevailing Visibility. Within CONUS, the greatest horizontal visibility which is equaled or surpassed throughout half or more of the horizon circle. It need not be a continuous half.

i. Surface Observation. An evaluation of meteorological elements that describes the state of the atmosphere at the location where the observation is taken. OL-A, 3 WS takes surface observations at the weather station at Henry Post AAF, Bldg 4907.

j. Point Warning. A special notice provided when severe weather, which poses an imminent hazard to property or life, is occurring or is expected to occur. See appendix L for point warning criteria.

k. Weather Watch. Observations conducted at each surface observing station to detect and report significant changes in specified weather elements. There are four types of weather watches.

(1) Continuous Weather Watch. Observers continuously monitor weather conditions and perform no other significant

duties. OL-A, 3 WS does not conduct a Continuous Weather Watch.

(2) Basic Weather Watch (BWW). Observers monitor weather conditions, but other weather duties preclude them from monitoring the weather continuously. OL-A, 3 WS conducts a BWW. The duty observer will recheck weather conditions at least every 20 minutes when ceilings are 1500 feet or less, visibility is less than 3 miles, precipitation in any form is occurring, or fog or mist is present.

(3) Modified Basic Weather Watch (MBWW). Observer monitors weather conditions every 5, 10, or 15 minutes as required when ceiling and/or visibility is less than 3,000 feet and/or 3 miles or severe weather is occurring or forecast to occur. The observers primary job during this type of watch is to monitor, record, and disseminate weather observations.

(4) Cooperative Weather Watch. A joint effort between agencies with personnel who have weather observer training (normally control tower personnel) to assist the primary weather observer in maintaining a current weather watch. Air Traffic Control Branch, Aviation Division, DPTM, supplements OL-A, 3 WS's, BWW (see appendix B).

6. RESPONSIBILITIES.

a. USAFACFS staff, commanders, and staff of subordinate units and tenant activities will--

(1) Identify weather service requirements in their areas of responsibility. Forward new, recurring requirements to Security Division, DPTM, for review and inclusion into this regulation. Forward special or nonrecurring weather support requirements directly to OL-A, 3 WS.

(2) Establish internal procedures for rapidly disseminating and effectively using weather information within their organizations.

b. Directorate of Plans, Training and Mobilization (DPTM) will--

(1) Provide office space for weather operations, administrative, maintenance, and storage functions.

(2) Provide funding for operating supplies.

(3) Provide logistic support in accordance with AFJI 15-157.

(4) Maintain USAFACFS staff cognizance over OL-A, 3 WS (Security Division).

(5) Coordinate direct weather support requirements (Security Division).

(6) Provide or arrange for administrative support to OL-A, 3 WS (Security Division).

(7) Conduct an annual review and revalidation of this directive (Security Division).

c. Personnel & Support Battalion, USAFACFS, will--

(1) Provide billeting and messing of OL-A, 3 WS personnel.

(2) Provide training of OL-A, 3 WS personnel in accordance with AFJI 15-157.

d. Directorate of Information Management (DOIM) will--

(1) Provide planning, installation, and maintenance of on-post weather communications circuits and equipment, including computers.

(2) Provide maintenance of Army-owned communications equipment operated by OL-A, 3 WS.

(3) Provide other weather communication support in accordance with AR 115-10/AFR 105-3.

e. OL-A, 3 WS will--

(1) Operate the Fort Sill Weather Station at Henry Post AAF.

(2) Activate an Alternate Observing Site (AOS) in Bldg 4915 to ensure uninterrupted weather observation support to Fort Sill in the event that the primary work center in Bldg 4907 is unusable.

(3) Generate routine weather products in accordance with this and other applicable directives.

(4) Generate special weather products in accordance with the Fort Sill SWOP and this regulation.

(5) Exercise command authority over personnel assigned to OL-A, 3 WS.

(6) Identify a standby observer for the purpose of recall to provide lightning warning/advisory support in the event thunderstorms will effect Fort Sill during OL-A, 3 WS observing section non-duty hours (weekends, federal holidays, and Fort Sill training holidays). Standby observers will be available for recall by pager. OL-A, 3 WS will ensure required agencies are informed of the pager number.

f. HQ ACC, Langley AFB VA, will --

(1) Provide weather maintenance personnel at Fort Sill. Monitor contract status and exercise contract authority over weather maintenance personnel assigned to Fort Sill.

(2) Fund for supplies and maintenance for USAF-owned weather equipment at Fort Sill.

(3) Monitor the operational status of--

(a) USAF-owned weather equipment at Fort Sill.

(b) Commercially leased weather communications circuits and equipment servicing Fort Sill.

7. PROCEDURES.

a. Priority of weather support duties. When there is a conflict, weather support service will be provided in the following order of priority.

(1) Complete Emergency War Orders Tasking.

(2) Respond to aircraft/ground emergencies.

(3) Respond to the Force Protection Officer for weather support during emergencies.

(4) Take and disseminate surface observations locally.

(5) Answer Pilot-to-Metro Service (PMSV) radio calls.

(6) Disseminate point warnings and advisories locally.

(7) Disseminate Pilot Reports (PIREPS) locally.

(8) Transmit surface observations and PIREPs over longline circuits.

(9) Monitor existing weather conditions.

(10) All other duties.

b. Observing.

(1) There is a weather observer on duty 24 hours per day, Monday through Friday, excluding federal holidays and Fort Sill training holidays, to perform a BWW as defined in paragraph 5k. Additional details of the BWW are in appendix A. The observer's primary function is to generate, record, and disseminate surface weather observations in accordance with AFMAN 15-111. Surface weather observations consist of METAR (hourly), SPECI, and local observations, as defined in para 5i. OL-A, 3 WS Flight Chief will designate standby observers and provide recall procedures to affected agencies prior to closure. Further details and specific criteria are in appendix A.

(2) OL-A, 3 WS and HPAAF control tower personnel conduct a Cooperative Weather Watch. Definition and details of the Cooperative Weather Watch are in paragraph 5k(4) and appendix B.

(3) Procedures pertaining to reporting runway surface condition/runway condition reading (RSC/RCR), and weather support during aviation emergencies/mishaps are outlined in appendix C.

(4) The designated position for official Fort Sill weather observations is on the airfield ramp, within 50 foot radius of the orientation mark, near the southeast corner of Building 4907. From this position the observer has a general unobstructed view of the horizon from the south to west to northwest, northeast, and from the east through south. This includes most of the horizon. However, the observer's horizontal field of view to the east and north is obstructed by Building 4908 and 4907 as portrayed in figure 2. The observer will move around Bldg 4907 and the control tower to obtain an unobstructed view of the runway environment, as required.

(5) Surface observations are taken, recorded, and disseminated in accordance with AFMAN 15-111. These procedures require that specific meteorological phenomena be recorded using specific criteria listed in the AFMAN 15-111 and DOD Flight Information Publications (FLIPs) that apply to Henry Post AAF. In addition, local criteria are established because of significance to local operations. Details of weather phenomena to be recorded, criteria to be used, and coding and format for local dissemination are outlined in appendix A. Units that have an operational need for other criteria must coordinate with OL-A, 3 WS to have these criteria included in appendix A.

(6) Communications. Figure 1 is a diagram of Fort Sill Weather Communications. Dissemination of all weather information is made by the following methods.

(a) Automated Weather Distribution System (AWDS) computer terminals are at--

- (1) DPTM Airfield Operations Flight Dispatch (Bldg 4907).
- (2) Army Radar Approach Control (ARAC) (Bldg 4907).
- (3) Control Tower (Bldg 4907).
- (4) Emergency Operations Center (EOC) (Bldg 455).
- (5) Fort Sill Field Officer of the Day (FOD) (Bldg 455).
- (6) Range Control (Bldg 2584).
- (7) 82d Medical Co (MEDEVAC) (Bldg 4915).

(b) Verification telephone calls will be made to confirm receipt of point warnings and advisories. A telephone "hot loop" connects OL-A, 3 WS to Emergency Operations Center (FOD during nonduty hours), Range Control, Fire Department, and MP Station for this purpose. A hotline also exists between ARAC, the control tower, and OL-A, 3 WS for verification of receipt. Common use telephone notification/verification calls will be made to agencies not on one of the hotlines. A separate hotline connects OL-A, 3 WS with Comanche County Civil Defense. During OL-A, 3 WS observing section non-duty hours (weekends, federal holidays, and Fort Sill training holidays), the 3 WS duty forecaster, Fort Hood, Texas, will notify the Fort Sill FOD by telephone if a Point Weather Warning is issued for Fort Sill. The Fort Sill FOD will then assume the responsibility for contacting the above agencies to disseminate Point Weather Warnings only.

(c) Changes to communications facilities or phone numbers affected by this plan will immediately be brought to the attention of OL-A, 3 WS. Do not move or disconnect AWDS terminals without prior coordination with OL-A, 3 WS.

(d) Force Protection. OL-A, 3 WS will respond to weather related requests in support of the Fort Sill Force Protection Officer. These requests will normally be relayed through the post Emergency Operations Center to OL-A, 3 WS. They may be related to planning for, or reaction to, weapons of mass destruction (WMD) or Military Support to Civil Authorities (MSCA).

c. Forecasting.

(1) OL-A, 3 WS has no permanently assigned weather forecasters.

(2) The Fort Hood weather station (DSN 738-6096/9620) will provide weather briefings to aircrews. A phone is available for this purpose at the Henry Post Army Airfield weather station. OL-A, 3 WS will maintain an AWDS Pilot Briefing Display, and instructions, at the observing counter in the Henry Post Army Airfield weather station. The duty observer will assist as necessary. The following charts are available for weather briefings.

- (a) Surface Analysis.
- (b) Radar Summary or Radar Display
- (c) Horizontal Weather Depiction.
- (d) Icing and Turbulence Charts.
- (e) Military Weather Advisory.
- (f) Flight Hazards (High Level).
- (g) Winds Aloft.

(3) Special forecast products relating to hazardous weather phenomena which could threaten life, damage property, or impede operations will be issued as advisories or point warnings. The description, criteria, and procedures for these special forecast products are outlined in the Fort Sill SWOP. See appendix L for advisory/point warning criteria.

(4) The Base Weather Station at Fort Hood provides backup meteorological support to OL-A, 3 WS. OL-A, 3 WS is not manned to provide forecast services. Air Force Weather Agency (AFWA) will notify the OL-A, 3 WS observer during weather station duty hours (FOD during non-duty hours) of point weather warnings if severe weather may affect Fort Sill.

(5) OL-A, 3 WS will issue advisories and relay point warnings for Fort Sill, during observing section duty hours, as indicated in paragraph 7b(1) above.

d. Pilot-to-Metro-Service (PMSV). A PMSV radio is operated during establish weather station duty hours by OL-A, 3 WS on UHF frequency 375.2 in accordance with USAF and FAA policy and

procedures. OL-A, 3 WS provides limited PMSV support. Weather observers are specifically prohibited from making forecasts. They can, however, read a forecast to a pilot. Observers must refer the aircrew to the nearest PMSV facility with forecasting service if the aircrew needs more detailed forecast support.

e. Pilot Reports (PIREPs). PIREPs are received at OL-A, 3 WS most frequently through PMSV contact and/or relay from control tower or ARAC. PIREPs received through these, or any other means, will be evaluated by the OL-A, 3 WS observer for significance to current operations and meteorological conditions.

(1) OL-A, 3 WS will locally disseminate all PIREPs received except those which duplicate information already reported by other means including previously reported PIREPs or which contain only information which is already contained in surface observations.

(2) AWDS format for PIREPs is outlined in table 7.

(3) OL-A, 3 WS will disseminate PIREPs in accordance with AFMAN 15-125 and the DOD FLIP.

f. Civil Defense.

(1) The National Weather Service is responsible for providing overall weather support to the civilian population. The Comanche County Civil Defense Office provides information and coordinates operations within Comanche County outside of Fort Sill.

(2) OL-A, 3 WS is responsible for relaying severe weather warnings from AFWA in the form of Point Weather Warnings to Fort Sill during established weather station duty hours.

(3) Since severe weather frequently affects both Comanche County and Fort Sill concurrently, it is important to crossflow and coordinate severe weather information between OL-A, 3 WS and the Civil Defense Office. Details of the agreement to accomplish this are in appendix D.

8. EQUIPMENT AND COMMUNICATIONS. Weather equipment, weather communications, and maintenance for both equipment and communications are provided by Air Force, Army, and civilian contracted resources. The following general provisions apply at Fort Sill. Details are outlined in appendices E and F. The governing directive is AFJI 15-157.

a. OL-A, 3 WS will provide or arrange for USAF-owned weather equipment for fixed installation at Henry Post AAF.

b. HQ ACC, Langley AFB, VA, will provide or arrange for--

(1) Longline communications circuits and terminal equipment to support OL-A, 3 WS operations.

(2) Contract maintenance on all USAF-owned weather equipment at Fort Sill.

c. Directorate of Public Works (DPW) will provide or arrange for--

(1) Construction and maintenance of supporting structures for fixed weather equipment.

(2) Electrical power (including emergency power), control, and signal cables required for operation of fixed weather equipment.

d. DOIM will provide or arrange for--

(1) On-post weather communications circuits.

(2) Local weather dissemination communications systems acquisition, installation, and maintenance, other than AWDS, if used or required.

9. CLIMATOLOGICAL SUPPORT.

a. OL-A, 3 WS has a limited capability to produce climatological data from locally available resources. Through the Air Force Combat Climatology Center (AFCCC), OL-A, 3 WS has access to extensive climatological support capabilities, sufficient to satisfy requirements of Fort Sill units.

b. OL-A, 3 WS routinely summarizes Fort Sill weather data on a monthly and annual basis for use by numerous local agencies. Appendix G outlines details of the specific data and distribution of the summaries. Additionally, the weather station produces a monthly climatology package to provide planning data to Fort Sill units. See appendix G for specifics.

10. COMMAND AND STAFF WEATHER BRIEFINGS. Director, DPTM, coordinates briefings for the Commanding General. The SWNCO provides the briefings. In the event that the SWNCO is unavailable (leave, etc.) the senior Air Force Weather member available will provide these briefings.

11. SEASONAL AND SPECIAL WEATHER BRIEFINGS.

a. Seasonal weather briefings are routinely incorporated into the Fort Sill Flying Safety Program in accordance with USAFACFS Reg 95-5.

b. Seasonal and special weather briefings are provided by OL-A, 3 WS to Fort Sill units and agencies upon request. Coordination is normally accomplished 2 weeks in advance.

12. OTHER LOCAL SUPPORT AGREEMENTS. General support responsibilities are outlined in AFJI 15-157. Local implementation of these responsibilities requires that mutually agreeable procedures be specified. To facilitate annual review and to allow agencies to be more readily cognizant of requirements and responsibilities, local support agreements pertaining to classified material, operational status reporting, serious incident reporting, and personnel status reporting are outlined in appendices H through K, respectively.

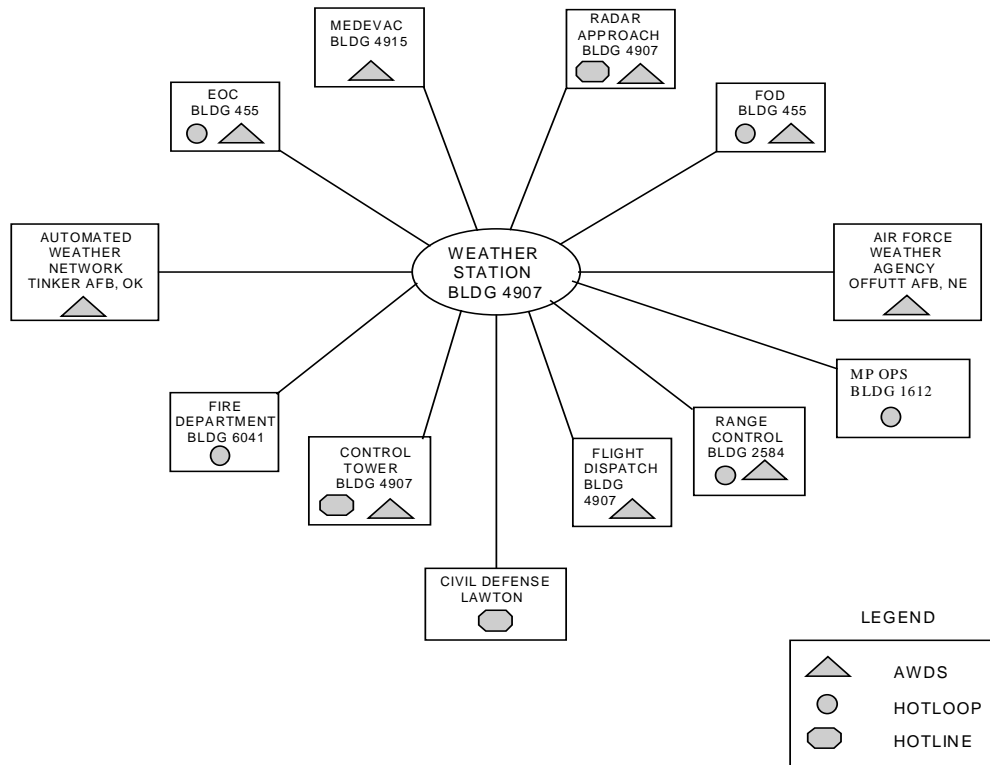


Figure 1. Fort Sill Weather Communications

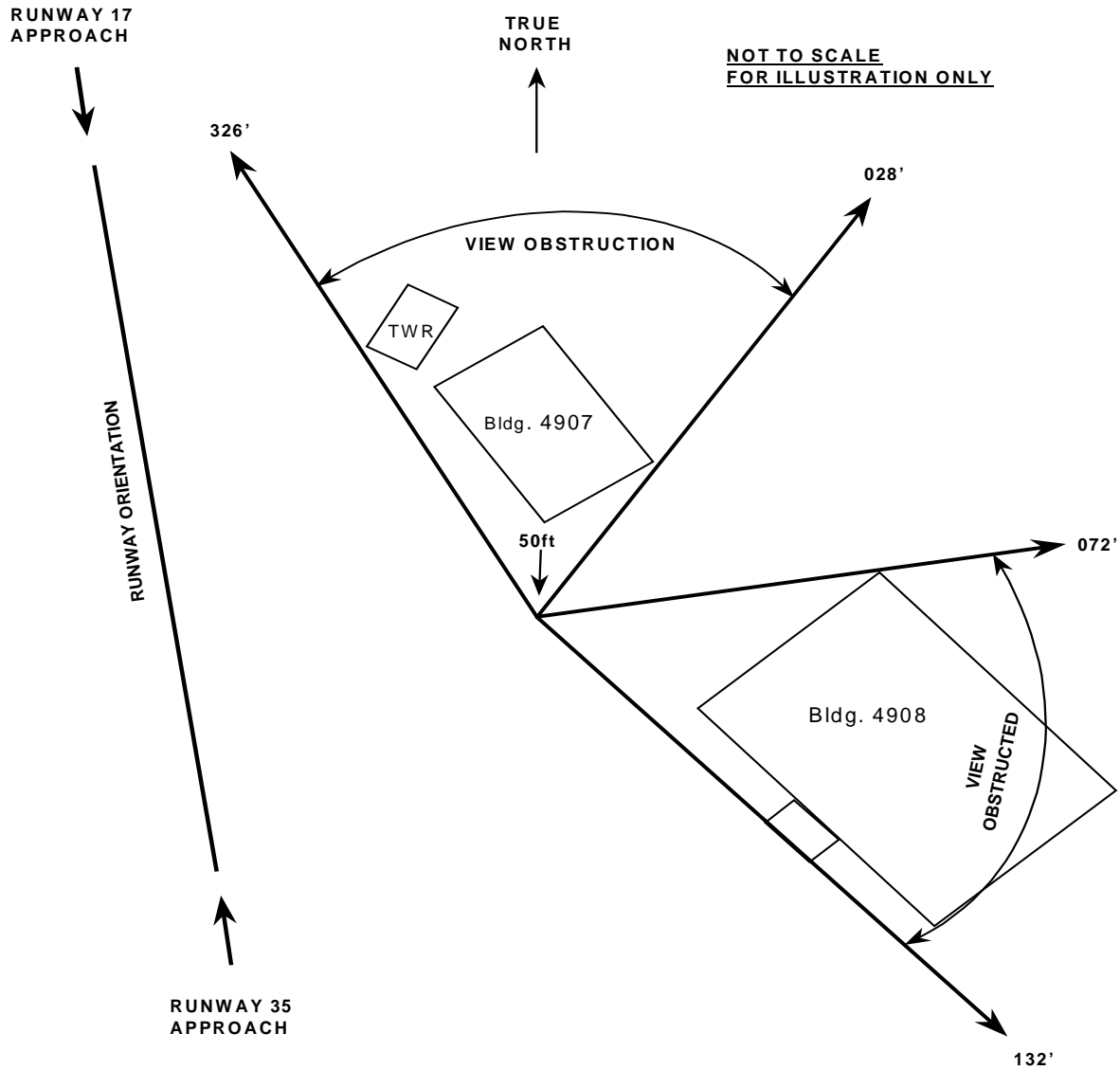


Figure 2. Observation Visibility Limitations

HENRY POST AAF FORT SILL, OKLAHOMA

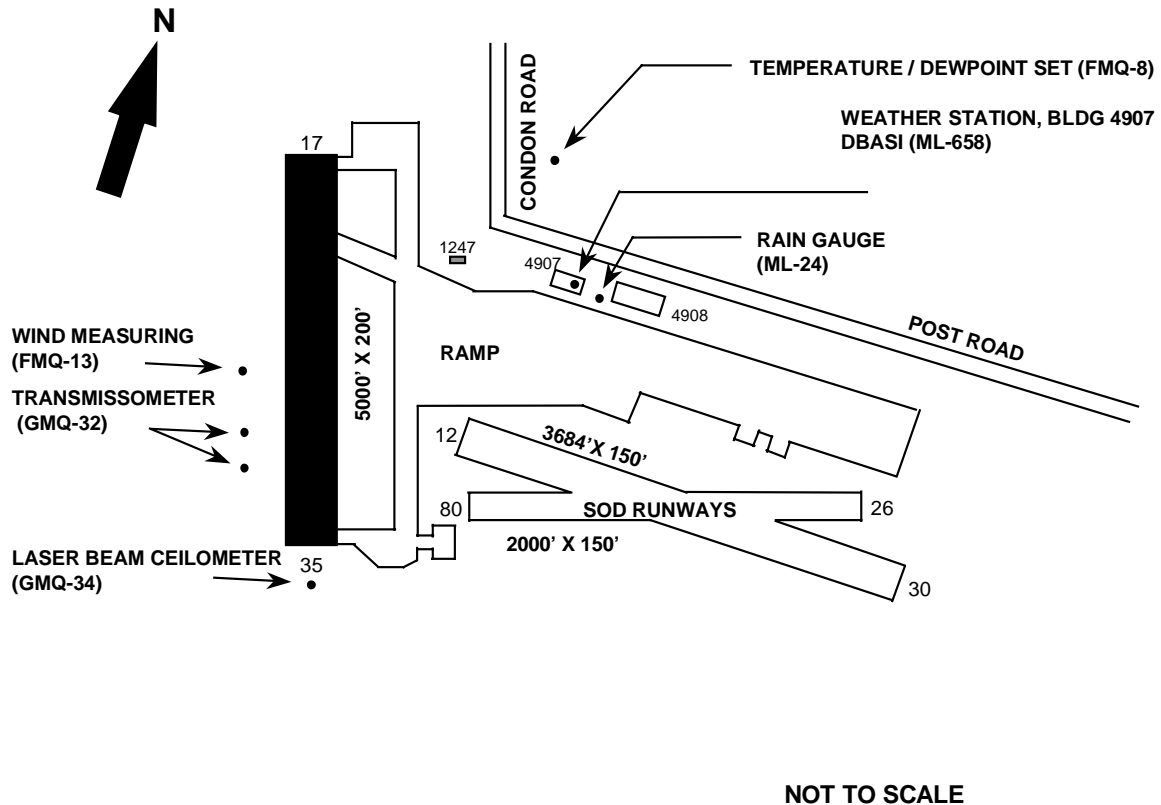


Figure 3. Fixed Weather Equipment Locations

Table 1. Cloud Height Criteria
(Heights in Feet Above Ground Level)

SPECI		REQUIREMENT	SOURCE(S)	
A	B		DOD FLIPS	
	ANY		-----	
Ceiling	Layer	AFMAN15-111	HIGH	LOW
3000		X	X	
1600			X	
1500		X		
1000		X		
800			X	
700		X		X
	700	X		
600				X
500		X		X
400				X
200		X		X

NOTE: A local observation will be transmitted when the ceiling decreases to less than, or if below, increases to equal or to exceed 100 feet.

Table 2. Visibility/RVR Criteria

PREVAILING VISIBILITY (STATUTE MILES)		RVR (FEET)		REQUIREMENT		SOURCE(S)	
SPECI	LOCAL	SPECI	LOCAL		DOD FLIES		
A	B	C	D	AFFMAN15- 111	HIGH	LOW	AR 95-1
3				X			
2				X		X	
1 $\frac{3}{4}$						X	
1 $\frac{1}{2}$				X		X	
1 $\frac{1}{4}$						X	
			6000	X		X	
1				X		X	
			5000	X		X	
			4000			X	
$\frac{3}{4}$						X	
$\frac{1}{2}$				X		X	
		2400		X		X	
	$\frac{1}{4}$						X
		1200					

NOTE: Upon receipt of a reportable tower visibility value, when either the tower or weather station's visibility is less than 4 miles and the two visibility values differ by a reportable SPECI criteria, OL-A, 3 WS will transmit a SPECI with the tower visibility as a remark in accordance with AFMAN 15-111, table 3-16, rule 16. Also, whenever prevailing visibility is less than $\frac{1}{4}$ mile and tower visibility differs by a reportable value, OL-A, 3 WS will transmit a local observation with tower visibility in remarks. If tower visibility is less than $\frac{1}{4}$ miles and prevailing visibility is $\geq \frac{1}{4}$ mile, OL-A, 3 WS will also transmit a local observation.

**Table 3. Automated Weather Distribution System (AWDS) Formats
TERMINAL AERODROME FORECAST
(As seen on altn Bases screen)**

1	2	4	5	6	8	8	13	13	11
LTS	FCST	15-15	15010G15KT	9999	BKN040	BKN100	T24/22	T12/12	
QNH	299	INS							
WND	18015G25KT	AFT	17						
BECMG	21-22	VRB35G50KT	4800	+TSRAGR	BKN015CB	OVC030	QNH2980	INS	
STG	XWND	PSBL			7				
BECMG	05-06	28015G25KT	9999	NSW	SCT025	QNH2985	INS	STG	XWND PSBL
	4a							12	
1	2	3	4	5	6	7	8	8	11
TIK	FCST	AMD	13-11	26010G15KT	3200	RA	SCT005	BKN015	
QNH	2992	INS	WND	18005KT	AFT	18			
	12								
BECMG	02-03	29010G18KT	0800	+TSRA	BKN010	BKN030	BKN250	QNH2999	INS
	4a								

1 - Station Identifier (TIK = Tinker AFB / LTS = Altus AFB).

2 - Forecast.

3 - AMD = Amendment to previous forecast. RTD = Forecast transmission delayed. COR = Correction to previous forecast.

4 - Valid time of the 24-hour forecast (15-15 = 1500Z-1500Z).

4a - Change in weather conditions (BECMG 02-03 = Gradually between 0200Z and 0300Z, weather conditions will change to ..., TEMPO 1520 = Intermittently between 1500Z and 2000Z the weather will be..., FM 20 = Conditions will rapidly change to ... between 2000Z-2030Z.).

5 - Wind speed and direction (15010G15KT = From 150 degrees true at 10 knots gusting to 15 knots.).

6 - Visibility in meters. See table 11 for conversion chart.

7 - Weather and obstruction to vision (see tables 9 and 12). NSW = No significant weather and/or obstructions restricting visibility to less than 7 miles.

8 - Sky Condition (see table 8). VV001 = Total obscuration with vertical visibility of 100 feet.

9 - Aircraft Icing Group. Intensity, type, and levels.

10 - Turbulence Group. Intensity, type, and levels.

11 - Minimum Altimeter to the nearest .01 inch of mercury.

12 - Remarks. Some common examples follow.

- TSRA OV FALCON RANGE 16-20 = Thunderstorms and rain showers over Falcon Range between 1600Z and 2000Z.

- WND 170V260 = Wind direction varying between 170 degrees true and 260 degrees true.

13 - Maximum/minimum temperature expected during valid time of forecast. T24/22 = Temperature 24 degrees celsius at 2200 zulu.

Table 4. Automated Weather Distribution System (AWDS) Formats

SURFACE OBSERVATIONS (As seen on the Local obs screen)												
1	2	3	4	5	6	7	8	9	10	11		
KFSI	METAR	RTD	1655Z	23009KT	1/4	FG	VVOO3	17/16	ALSTG	2983	RMK	WA
FOR	WNDS	PA	+1270	55/SD								
		12	13									

- 1 - Station Identifier (KFSI = Fort Sill).
- 2 - Observation Type (METAR = Record Hourly/Record Special, SPECI = Special, LOCAL = Local).
- 3 - RTD = Observation transmission delayed. COR = Correction to last observation.
- 4 - Time of observation (GMT).
- 5 - Wind direction and speed (17015G24KT = From 170 degrees magnetic at 15 knots gusting to 24 knots).
- 6 - Prevailing visibility in statute miles. See table 11 for conversion to meters.
- 7 - Weather and obstructions to visions (see tables 9 and 12).
- 8 - Sky Condition (see table 8).
- 9 - Temperature/Dewpoint in degrees Celsius.
- 10 - Altimeter Setting reported to the nearest 1/100 of an inch of mercury.
- 11 - Remarks elaborating on the observation. Some common examples:
 - WA FOR WNDS = Weather Advisory for wind speed.
 - CB 30S MOV N = Cumulonimbus cloud 30 miles south moving north.
- 12 - Pressure Altitude in feet.
- 13 - Time observation transmitted in minutes past the hour and the observer's initials.

Table 5. Automated Weather Distribution System (AWDS) Formats

SURFACE OBSERVATIONS (As seen on the <i>altn Bases</i> screen)										
1	2	3	4	5	6	7	8	9	10	11
SPS	METAR	RTD	131655	VV002	1/4SM	FG	16/15/17006	A2983	SLP088	
1	2	4	5	5	5	6	7	7	8	9
LTS	METAR	130655	SCT10	BKN025	OVC100	3SM	-TSRA	BR		
20/18/19025	G45/	A3002	SLP151	FQT	LTGIC	TS	30SW	MOV	N	
10	11	12								

- 1 - Station Identifier (SPS = Sheppard AFB / LTS = Altus AFB).
- 2 - Observation Type (METAR = Record Hourly/Record Special, SPECI = Special.).
- 3 - RTD = Observation transmission delayed. COR = Correction to last observation.
- 4 - Time of observation (GMT).
- 5 - Sky condition (see table 8).
- 6 - Prevailing visibility in statute miles. See table 11 for conversion to meters.
- 7 - Obstructions to vision and weather (see tables 9 and 12).
- 8 - Temperature/Dewpoint in degrees Celsius.
- 9 - Wind direction and speed. (17012G26KT = From 170 degrees true at 12 knots gusting to 26 knots.)
- 10 - Altimeter Setting reported to the nearest 1/100 of an inch of mercury.
- 11 - Sea Level Pressure in millibars (for meteorologist use.)
- 12 - Remarks elaborating on observation. Common examples:
 - CB DSNT W MOV NE = Cumulonimbus cloud distant west moving northeast.
 - TS OVHD MOV E GR 3/4 = Thunderstorm overhead moving east, largest hailstone equaled 3/4 = inch in diameter.
 - FRQ LTGICCCCG = Frequent lightning, in cloud, cloud to cloud, and cloud to ground.
 - VIS S 1/2 = Sector visibility to the South, 1/2 statute mile.

Table 6. Automated Weather Distribution System (AWDS) Formats

**LOCAL WEATHER ADVISORY/POINT WARNING FORMATS
(As seen on the *Local obs* screen)**

Example point weather warning:

1 - FORT SILL, OK WEATHER WARNING 12-003
 2 - VALID 09/0830Z (09/0330L) TO 09/1000Z (09/0500L)
 3 - MODERATE THUNDERSTORMS. SOUTH WINDS AT 30KTS GUSTING TO 45KTS AND HAIL 1/2 INCH IN DIAMETER.
 4 - 22/SM

- 1 = Location of point warning and number.
 2 = Valid date/time of point warning. (Both GMT and local times.)
 3 = Plain language explanation of expected weather conditions.
 4 = Minutes past the hour the message was transmitted and sender's name or initials.

Example weather advisories:

1 - AREA WEATHER ADVISORY	TERMINAL WEATHER ADVISORY
2 - TEMPERATURE GREATER THAN OR EQUAL TO 31 C/88 F	Gust spread greater than or equal to 15 knots CANCELLED AT THIS TIME
3 - 56/LN	09/MD

- 1 = Area or Terminal Advisory (Area = Within 20 nautical miles of Fort Sill, Terminal = Within 7 nautical miles of Fort Sill.)
 2 = Plain language explanation of existing conditions.
 3 = Minutes past the hour the message was transmitted and sender's name or initials.

Table 7. Automated Weather Distribution System (AWDS) Formats

**PILOTS REPORTS (PIREPS)
(As seen on the Local obs screen)**

Examples:

KFSI PIREP TIME 1520 OV LAW 180009 FL 020 TP OH58 SK OVC005-015
WX FV10SM TA 20 WND 16020 TB LGT CAT 010 IC NEG

KFSI URGENT PIREP TIME 2010 OV LAW 330005 FL UNKN TP CH47 SK
BKN012 BKN UNKN WX FV01SM FZRA TA -05 WND 340030 TURB LGT-MDT
CHOP BLO-020 ICE SVR CLR 005-020 RMRK DURGD

KFSI = Fort Sill

PIREP/URGENT PIREP = Pilot report. Reports containing tornadoes, funnel clouds, water spouts, thunderstorms (see note), tropical cyclones, squall lines, severe or extreme turbulence, severe icing, mountain wave turbulence, widespread dust storms or sandstorms, hail, low-level wind shear, or volcanic ash cloud flagged as URGENT.

NOTE: An area of widespread thunderstorm activity, thunderstorms along a line with little or no space between individual storms, or thunderstorms embedded in cloud layers or concealed by haze are considered severe (urgent) criteria for PIREPs. This does not include isolated or scattered thunderstorms not embedded in cloud layers or concealed by haze.

TM = Time of observation (GMT).

OV = Location of aircraft with respect to a navigational aid. (LAW 330005 - 5 miles NW of Lawton. LAW 355009 = 9 miles north of Lawton, over Fort Sill).

FL = Flight level or aircraft in hundreds of feet above mean sea level. (020 = 2000 feet, 250 = 25,000 feet, UNKN = unknown.)

TP = Type of aircraft.

SK = Sky cover. Sky condition, cloud base, cloud top. (table 9)

WX = Visibility and Weather (FV10 = Flight level visibility 10 statute miles. FV01 FZRA = Flight level visibility 1 statute mile in freezing rain. (table 9)

TA = Outside air temperature at flight level in degrees Celsius. (05 = Plus five degrees C. -03 = Minus three degrees C.)

WV = Wind direction and speed. (09030 = Wind from 090 degrees at 30 knots)

TB = Turbulence. Intensity: LGT = Light, MDT = Moderate, SVR = Severe, EXTRM =extreme, NEG = Negative. Type: CAT = Clear air turbulence. CHOP.

Altitude: 010-045/070-ABV (from 1,000 to 4,500 feet) 070-ABV = 7,000 feet and above

IC= Icing. Intensity: TRACE, LGT = Light, MDT = Moderate, SVR = Severe, NEG = Negative. Type: RIME, CLR = Clear, MIXED.

RM = Pilot remarks. (DURGD = During descent, DURGC = During climb.)

Table 8. Sky Cover/Condition

CODE	DEFINITION
VVXXX	8/8 surface-based obscuration with vertical visibility in hundreds of feet.
SKC	Clear Skies.
FEW	Trace through 2/8 total sky cover.
SCT	Scattered. 3/8 through 4/8 total sky coverage.
BKN	Broken. 5/8 to less than 8/8 total sky coverage.
OVC	Overcast. 8/8 total sky coverage.

Table 9. Weather and Obstruction to Vision Codes

CODE	WEATHER (Reported upon occurrence)
GR or GS	HAIL
DZ	DRIZZLE
FC	FUNNEL CLOUD
PL	ICE PELLETS
RA	RAIN
SHRA	RAIN SHOWERS
SN	SNOW
SG	SNOW GRAINS
GS	SNOW PELLETS OR SMALL HAIL
SHSN	SNOW SHOWERS
TS	THUNDERSTORM
+FC	TORNADO
FZDZ	FREEZING DRIZZLE
FZRA	FREEZING RAIN
IC	ICE CRYSTALS

NOTES:

Precipitation Intensity Symbols. "+" = Heavy. No symbol = Moderate. "-" = Light. No intensity is assigned to Hail (GR), or Ice Crystals(IC), or Thunderstorms (TS).

CODE	OBSTRUCTIONS TO VISION (Reported when occurring and prevailing visibility less than 7 miles)	
BLDU = BLOWING DUST	FG = Fog	FU = Smoke
BLSN = BLOWING SNOW	BR = Mist	
DU = DUST	HZ = Haze	

Table 10. Contractions and Abbreviations

CONTRACTION	DEFINITION
ACC	Alto cumulus Castellanus
ACFT MSHP	Aircraft Mishap
ACSL	Alto cumulus Standing Lenticular
ALF	Aloft
ALQDS	All quadrants
ALSTG	Altimeter setting
APCH	Approach
AWDS	Automated Weather Distribution System
BKN	Broken
BLO	Below
CA	Cloud-to-Air
CAT	Clear Air Turbulence
CB	Cumulonimbus
CBMAM	CB Mammatus
CC	Cloud to Cloud
CG	Cloud to Ground
DSNT	Distant
ESTMD	Estimated
FIRST	First Observation in a Break in Coverage
FRMG	Forming
FRQ	Frequent
G	Gust
HVY	Heavy
IC	In-Cloud Ice Crystals
ICG	Icing
LGT	Light
LTG	Lightning
LWR	Lower
MOD	Moderate
MOV	Moving, Movement, & Moved
OCNL	Occasional
OHD	Overhead
OVC	Overcast
OVR	Over
PRESFR	Pressure Falling Rapidly
PRESRR	Pressure Rising Rapidly
RGD	Ragged
RWY	Runway
SCT	Scattered
SFC	Surface
SQ	Squall
STNRY	Stationary
TCU	Towering
TS	Thunderstorm

TURBC	Turbulence
VC	Vicinity
VIS	Visibility
VRB	Variable
WSCONDS	Wind Shear Conditions
WSHFT	Wind Shift

NOTE: The term cumulonimbus and thunderstorm are synonymous, therefore, "thunderstorm" will be used in all cases of voice communications.

Table 11. Reportable Visibility Conversion Statute

Statute Miles	Meters	Statute Miles	Meters	Statute Miles	Meters
0	0000	3/4	1200	1 7/8	3000
1/16	0100	7/8	1400	2	3200
1/8	0200	1	1600	2 1/4	3600
3/16	0300	1 1/8	1800	2 1/2	4000
1/4	0400	1 1/4	2000	2 3/4	4400
5/16	0500	1 3/8	2200	3	4800
3/8	0600	1 1/2	2400	4	6000
1/2	0800	1 5/8	2600	5	8000
5/8	1000	1 3/4	2800	6	9000
				>7	9999

Table 12. Forecast Weather/Obstruction to Vision

1	2	3	4	5
INTENSITY/ PROXIMITY	DESCRIPTOR	PRECIP	OBSCURATION	OTHER
- = LIGHT	MI = SHALLOW PR = PARTIAL	DZ = DRIZZLE	BR = MIST	PO = WELL DEVELOPED DUST/SAND WHIRLS
= MODERATE	BC = PATCHES	RA = RAIN	FG = FOG	SQ = SQUALL
+ = HEAVY	DR = LOW/ DRIFTING	SN = SNOW	FU = SMOKE	FC = FUNNEL CLOUD, TORNADO, WATER SPOUT
	BL = BLOWING	SG = SNOW- GRAINS	VA = VOLCANIC- ASH	SS = SAND- STORM
	SH = SHOWER	IC = ICE- CRYSTALS	DU = WIDE- SPREAD DUST	DS = DUST- STORM
	TS = THUNDER- STORM	PL = ICE- PELLETS	SA = SAND	
	FR = FREEZING	GR = HAIL	HZ = HAZE	
		GS = SMALL HAIL OR SNOW PELLETS	PY = SPRAY	

CONSTRUCT A w'w' GROUP BY GOING 1 THRU 5, I.E., INTENSITY -
DESCRIPTOR WEATHER PHENOMENA. EX: +SHRA (HEAVY SHOWERS OF RAIN)

Appendix A

OBSERVING SUPPORT

A-1. The OL-A, 3 WS weather observer conducts a Basic Weather Watch (BWW) from the weather station in Building 4907 at Henry Post AAF. The BWW is specifically defined in AFMAN 15-111 and in paragraph 5 of this regulation. Due to the observer's other duties as well as location and visibility restrictions, the observer cannot be expected to detect and report all weather changes as they occur. To enhance and supplement the BWW, a Cooperative Weather Watch with ATC Tower personnel is established in appendix B. In addition to taking and disseminating required hourly record observations, the BWW observing program involves the following minimum requirements.

a. Recheck weather conditions at least every 20 minutes when any of the following conditions are occurring.

- (1) Ceiling less than 3,000 feet.
- (2) Visibility less than 3 miles.
- (3) Precipitation (any form).
- (4) Fog or Mist is present.

b. Review forecast products to keep abreast of changes expected to affect the local area.

c. When a reliable source reports conditions significantly different from the last disseminated observation, the observer will recheck the weather conditions and, if required, disseminate a new observation.

A-2. There are four types of Surface Weather Observations routinely produced.

a. Aviation Routine Weather Report (METAR). METAR observations are complete observations taken hourly, regardless of weather changes. Each METAR observation is disseminated locally and longline over the AWDS in accordance with AFMAN 15-111.

b. Aviation Routine Special Weather Report (SPECI). SPECI observations are required to be taken to report significant changes in weather elements. Each SPECI observation is disseminated locally and longline over the AWDS in accordance with AFMAN 15-111.

c. Local Observation (LOCAL). LOCAL observations are taken to report changes in conditions significant to local airfield operation. Each Local observation is disseminated only to Fort Sill agencies over the AWDS.

d. Single Element SPECIs. Single Element SPECIs will be disseminated both locally and longline when a delay in reporting all elements of a SPECI would cause an immediate threat to life or property. These observations are normally used to report tornadoes or funnel clouds.

A-3. Observations contain the following elements.

a. METAR, SPECI, and aircraft mishap local observation will contain the following elements.

- (1) Time of observation in Greenwich Mean Time (GMT).
- (2) Sky condition.
- (3) Prevailing visibility in statute miles.
- (4) Runway Visual Range (RVR) in feet (if required).
- (5) Present weather.
- (6) Temperature and dewpoint (in degrees Celsius).
- (7) Surface wind direction (in degrees magnetic), speed, and character (gusts).
- (8) Altimeter setting in inches of mercury.
- (9) Significant supplementary remarks.
- (10) Pressure altitude in feet.
- (11) Gust spread (when 15 knots or greater).
- (12) Runway surface condition/runway condition reading (RSC/RCR) as required.

b. Single element SPECIs will contain only GMT time and the reportable condition.

A-4. A SPECI observation will be taken and disseminated to report significant changes in weather elements when any of the following criteria are observed.

a. Ceiling. The ceiling is observed to form or dissipate below, decrease to less than, or if below, increase to equal or exceed the ceiling heights listed in table 1, column A.

b. Sky Condition. A layer of clouds or obscuring phenomena aloft is observed below the height in table 1, column B, and no layer was reported below that height in the preceding observation.

c. Visibility. Prevailing visibility is observed to decrease to less than or, if below, increase to equal or exceed the distances listed in table 2, column A.

d. Runway Visual Range (RVR). The RVR for runway 35 is observed to decrease to less than or, if below, increase to equal or exceed the distances listed in table 2, column C. RVR instrumentation is installed only for the approach to runway 35. There is no instrumentation installed to determine RVR for the approach to runway 17. RVR is always reported when visibility is \leq 1 mile.

e. Tornado or Funnel Cloud.

(1) Is observed.

(2) Disappears from sight.

f. Thunderstorm.

(1) Begins (unless another thunderstorm is in progress).

(2) Ends (15 minutes after last occurrence of criteria for a thunderstorm).

g. Precipitation.

(1) Hail begins or ends.

(2) Freezing precipitation begins, ends, or changes in intensity.

(3) Ice pellets begin, end, or change in intensity.

(4) Any other type of precipitation begins or ends.

h. Wind and wind shifts.

(1) Wind speed increases 16 knots and is sustained at 22 knots or more for at least 1 minute.

(2) Any wind direction change of 45 degrees or more in less than 15 minutes when the wind speed is at least 10 knots throughout the shift.

i. RSC/RCR. RSC/RCR is first reported or changes to another reportable value.

j. RVR. Runway Visual Range decreases to less than or, if below, increases to equal or exceed 2400 feet.

k. Miscellaneous.

(1) Real World Nuclear Accident. When notified of a real-world nuclear accident, OL-A, 3 WS will take and disseminate a SPECI (locally and longline) and append the remark "AEROB" as the last remark on the longline disseminated observation.

(2) Volcanic Ash (when first observed).

(3) Upon resumption of Observing Services. Within 15 minutes after returning to duty following a break in hourly coverage if a METAR was not filed as scheduled during that 15 minute period.

(4) Tower Visibility. Upon receipt of a reportable tower visibility value, when either the tower or the weather station's visibility is less than 4 miles and they differ by a reportable SPECI criteria value, OL-A, 3 WS will transmit a SPECI with the tower visibility as a remark.

(5) Any other meteorological situation which, in the opinion of the observer, is critical to safety of aircraft operations.

A-5. A LOCAL observation will be taken and disseminated when any of the following criteria are met. These criteria are significant to local airfield operations but do not meet special criteria.

a. Altimeter Setting. The altimeter setting will be reported at a frequency not to exceed 35 minutes since the last determination when there has been a change of .01 inches of mercury or more.

b. Aircraft Mishap. Immediately following notification or sighting of an aircraft mishap at or near Fort Sill, unless there has been an intervening METAR or SPECI observation. A local observation is not required for an inflight emergency; however, the observer will intensify the weather watch when notified of an inflight emergency to ensure maximum support to the aircraft in

distress. OL-A, 3 WS will resolve any doubts in favor of taking the observation.

c. RVR.

(1) Visibility conditions (≤ 1 mile) for reporting RVR are first observed and when the conditions are observed to no longer exist.

(2) RVR decreases to less than or, if below, increases to equal or exceed RVR values listed in table 2, column D.

(3) RVR is first determined to be not available (e.g., RVRNO) when runway 35 is the active runway and when it is first determined that the "NO" report is no longer applicable, provided conditions for reporting RVR exist.

d. Surface Winds. Once the following criteria are met, a new observation (LOCAL, SPECI, OR METAR) will be taken and disseminated locally on the half hour or at a frequency not to exceed 35 minutes until these wind criteria are no longer met.

(1) Wind speed. When the maximum surface wind speed (either steady or gusting) equals or exceeds 30 knots.

(2) Gust Spread. When the difference between the maximum instantaneous peak wind and its associated lull equals or exceeds 15 knots during the 10-minute period preceding the observation.

e. Other Meteorological Situations. Any other meteorological situation which, in the opinion of the observer, is significant to local operations.

f. Aviation Operations. In addition to the above criteria, local observations will be taken for other weather criteria, which impact aviation unit operations. These criteria, along with justification and impact, will be provided in writing by the using unit to OL-A, 3 WS to be incorporated into this regulation.

Appendix B

SUPPORT AGREEMENT WITH AIR TRAFFIC CONTROL (ATC) BRANCH, DPTM

B-1. Cooperative Weather Watch.

a. ATC tower personnel will assist the weather observer in maintaining a current weather observation by notifying the OL-A, 3 WS observer of any change in weather conditions. This can be significant for obstructed angles, which result in a deviation from the latest reported observation of--

- (1) Ceiling.
- (2) Sky condition.
- (3) Visibility.
- (4) Tornado/funnel clouds being observed and/or disappearing.
- (5) Thunderstorms beginning or ending.
- (6) Precipitation beginning or ending.
- (7) Any other weather or obstruction to vision that, in the opinion of ATC personnel, will affect the approach zone or airfield complex.

b. In addition to normal procedures, the OL-A, 3 WS observer will redetermine the atmospheric conditions, then record and disseminate a new observation (if changed conditions meet reporting criteria) when notified by ATC personnel that a change in the reported conditions has occurred.

B-2. Tower Visibility Reporting Requirements. Tower personnel will notify weather station personnel whenever tower visibility is observed to decrease to less than or, if below, increase to equal or exceed SPECI reportable values indicated in table 2, column A.

B-3. Supplementary Radar Reports. Army Radar Approach Control (ARAC) personnel will, upon request, and when operationally feasible, provide OL-A, 3 WS with radar reports on weather echoes.

B-4. PIREPs. Tower and ARAC personnel will pass all pilot reports received to OL-A, 3 WS. OL-A, 3 WS will disseminate locally all PIREPs received except those that are duplicates or

only report information already contained in the surface observation. (Distance and location of PIREPs should be with respect to navigational aids (i.e., Lawton VOR).)

B-5. Weather Training. OL-A, 3 WS will provide limited weather observing training for air traffic controllers. The ATC Facility Chief will coordinate training with OL-A, 3 WS.

B-6. Active Runway Changes. Tower personnel will notify OL-A, 3 WS of active runway changes.

B-7. Runway Light Settings. Tower and ARAC personnel will notify the OL-A, 3 WS observer of high intensity runway light setting values and changes when runway 35 is the active runway.

B-8. Outages. Tower and ARAC personnel will advise OL-A, 3 WS if any AWDS equipment is not functioning properly. OL-A, 3 WS will notify maintenance.

B-9. Emergencies, Mishaps, or Accidents. Tower and/or ARAC will notify OL-A, 3 WS immediately of all aircraft emergencies, mishaps, or accidents.

B-10. Weather Data. Weather data formats required to be displayed on AWDS for ATC use are detailed in--

- a. Table 4 and 5 for current observation.
- b. Table 3 for forecast.
- c. Table 6 for advisories and point warnings.
- d. Table 7 for PIREPs.

B-11. Emergency Actions. When notified of an aircraft emergency, mishap, or accident either through the Crash Net or any other means, OL-A, 3 WS will--

- a. Intensify local weather watch. Update as required.
- b. Collect weather information required or requested by accident investigation boards.
- c. Upon notification of an aircraft mishap, OL-A, 3 WS will take and disseminate a full element "aircraft mishap" LOCAL observation.

Appendix C

SUPPORT AGREEMENT WITH AVIATION DIVISION, DPTM

C-1. Airfield Operations.

a. Runway Surface Condition/Runway Condition Reading (RSC/RCR).

(1) OL-A, 3 WS will keep airfield operations personnel advised of current weather phenomena which may affect the runway through the normal dissemination of observations, advisories, and point warnings.

(2) Airfield operations personnel are responsible for determining--

(a) When RSC and RCR readings are to be taken.

(b) What numerical RSC/RCR values, if any, are applicable.

(3) The Airfield Operations Dispatcher will notify the OL-A, 3 WS weather observer when any of the following RSC/RCRs are to be disseminated.

(a) Wet runway (WR//).

(b) Slush on runway (SLR).

(c) Loose snow on runway (LSR).

(d) Packed snow on runway (PSR).

(e) Ice on runway (IR).

(f) Any of the above conditions exist in patches (P).

(g) The runway has been sanded (SANDED).

(4) Having once reported one of the preceding RCRs, the dispatcher will notify the OL-A, 3 WS weather observer when the conditions reported change or no longer exist.

(5) OL-A, 3 WS will encode and transmit RSC/RCR over AWDS until advised of a change by the dispatcher.

(6) When Airfield Operations is closed, OL-A, 3 WS will encode and report RCRNR when precipitation occurs and will continue to report RCRNR until Airfield Operations reopens.

C-2. Flight Weather Briefings. Flight Weather Briefings to aircrews will be provided as outlined in paragraph 7c, this regulation.

C-3. Aircraft Emergencies and Mishaps.

a. The dispatcher will notify OL-A, 3 WS immediately upon gaining knowledge of any aircraft emergency, mishap, or accident on or near Fort Sill.

(1) For aircraft mishaps or accidents this notification will normally be accomplished through ATC Tower activating the Primary Crash Alarm System (PCAS) in accordance with USAFACFS Pam 385-95, Aircraft Accident Prevention Program.

(2) For aircraft emergencies, if the PCAS is not activated, base operations will activate the secondary crash alarm system (SCAS) in accordance with USAFACFS Reg 385-95. If the SCAS fails, the dispatcher will immediately notify OL-A, 3 WS through direct verbal communication.

b. OL-A, 3 WS will take immediate action as prescribed in USAFACFS Pam 95-5 and in appendix A, this regulation.

C-4. Safety. The Aviation Safety Section, Aviation Division, DPTM, will--

a. Include OL-A, 3 WS in an Aviation Accident Prevention Survey at least once annually.

b. Notify OL-A, 3 WS when hazard reports are received in any form which indicates that weather or weather service may be or has been a hazard to aviation safety. OL-A, 3 WS will aid in determining the office of primary responsibility within the USAF for investigation and determination of appropriate action to eliminate the hazard.

C-5. Supply. Supply Branch, Aviation Division, DPTM, will provide OL-A, 3 WS with the necessary funding and support for office, administrative, and operational supply items within the limits of regulations governing supply distribution.

Appendix D

SUPPORT AGREEMENT WITH LAWTON/COMANCHE COUNTY CIVIL DEFENSE

D-1. The purpose of this appendix is to outline the agreement between the Fort Sill Weather Station (OL-A, 3 WS) and Lawton/Comanche County Civil Defense in order to enhance local severe weather watch, promote the exchange of severe weather information, and to provide accurate, timely severe weather information to the overall Fort Sill and Lawton/Comanche County community.

D-2. The following is general information concerning the agreement.

a. A direct telephone hotline has been furnished between OL-A, 3 WS and Lawton/Comanche County Civil Defense.

b. Lawton/Comanche County Civil Defense is responsible for civil defense of Lawton and the surrounding community during severe weather outbreaks.

D-3. OL-A, 3 WS will--

a. Notify Lawton Civil Defense whenever severe thunderstorm or tornado point warnings are issued for a 5NM radius of Henry Post AAF. Severe thunderstorms are defined as those thunderstorms which may produce the following--

(1) Tornadoes (Sirens sounded on Fort Sill).

(2) Surface winds of 50 knots or greater.

(3) Hail of 3/4 inch diameter or greater.

b. Assist Civil Defense in evaluation/verifying spotter reports, as time permits.

D-4. Lawton/Comanche County Civil Defense will--

a. Relay tornado/funnel cloud sighting and significant reports of severe weather to OL-A, 3 WS as soon as possible after receipt.

b. Notify OL-A, 3 WS upon activation of tornado warning sirens.

c. Recognize that the National Weather Service, through its designated forecast office, is responsible for issuing weather warnings, watches, advisories, and forecasts for the civilian population.

d. Provide and/or arrange for any direct telephone circuit between Civil Defense and the post weather station.

Appendix E

WEATHER EQUIPMENT AND MAINTENANCE

E-1. OL-A, 3 WS uses a mix of Air Force and Army equipment to produce weather reports at Henry Post AAF.

a. Fixed Air Force Equipment. OL-A, 3 WS is the custodian and operator of the following fixed installation Air Force supplied weather equipment. (See figure 3.)

(1) One cloud height set located on the center line 1500 feet from the approach end of the instrumented runway 35. The set measures cloud heights from 0 to 12,000 feet.

(2) One transmissometer located 625 feet west of the center line and 500 feet from the approach end of runway 35. The transmissometer measures horizontal visibility from 0 to 1 mile. The observed values are used to determine runway visual range (RVR) distance.

(3) One wind measuring set located 600 feet west of the center line and 2200 feet from the approach end of runway 35. Instantaneous wind speed and direction can be observed on indicators located in the tower, radar approach control facility and the flight planning room. Wind speed and direction are recorded on paper in the observing section of the weather station. Direction is reported in tens of degrees with respect magnetic north. Speed is recorded in knots.

(4) One temperature/dewpoint measuring set located 825 feet east of the center line and 1500 feet from the approach end of runway 17. Temperature and dewpoint values are available in whole degrees Fahrenheit and tenths of a degree Celsius.

(5) One rain gauge located 55 feet southeast of the southeast corner of Bldg 4907.

(6) One Digital Barometer and Altimeter Setting Indicator located in post weather station Bldg 4907.

b. Portable Air Force Equipment. OL-A, 3 WS is the custodian and operator of the following portable Air Force supplied weather equipment.

(1) Aneroid Barometer (weather station).

(2) Sling Psychrometer (weather station).

(3) Mobile Observing System (MOS) Kit.

E-2. Maintenance restoral priorities. Priorities are established to ensure allocation of available resources is consistent with their relative importance. If multiple outages occur, equipment, repair must be prioritized and accomplished in the following order:

Equipment	Priority
Wind Set (FMQ-13)	1
Cloud Height Set (GMQ-34)	2
Transmissometer (GMQ-32)	3
Temperature/Dewpoint Set (FMQ-8)	4
Digital Barometer Altimeter Setting Indicator (ML-658)	5
Aneroid Barometer (ML-102)	6
Rain Gauge (ML-17)	7

E-3. Mission impact may change as weather conditions change. Therefore, the Flight Chief, Station Chief, or senior weather person on duty may adjust priorities as conditions warrant.

Appendix F

WEATHER COMMUNICATIONS AND MAINTENANCE

F-1. OL-A, 3 WS uses a mix of Air Force, Army, and commercially contracted circuitry and terminal equipment to receive and disseminate weather data both on-post and off-post.

a. AR 115-10/AFR 105-3 governs acquisition and installation of circuitry and terminal equipment.

b. Maintenance responsibility for circuitry and terminal equipment for Fort Sill weather support is as follows:

SYSTEM/EQUIPMENT	CIRCUIT		TERMINAL
	OFF-POST	ON-POST	
AWDS	82 CS	DOIM	82 CS
METSAT	82 CS	DOIM	82 CS
PMSV(UHF RADIO)	NA	NA	ARAC
WEA/TWR/ARAC HOTLINE	NA	DOIM	DOIM
INTERCOM (Bldg 4907)	NA	DOIM	DOIM
HOTLOOP	NA	DOIM	DOIM

F-2. The 82d Communications Squadron (82 CS), Sheppard Air Force Base, Texas, is the responsible agency for management of Fort Sill weather communications maintenance. This maintenance is normally accomplished through commercial contracts. The 82d Communications Squadron monitors operational status and contract requirements.

F-3. Directorate of Information Management (DOIM) provides direct maintenance for Army-supplied equipment and circuitry.

Appendix G

WEATHER DATA SUMMARIES

G-1. Summaries. OL-A, 3 WS will create the following weather data summaries.

a. Monthly Weather Data Summaries.

- (1) Daily maximum temperature.
- (2) Daily minimum temperature.
- (3) Daily total precipitation amounts.

b. Monthly Climatology Package.

(1) Cover sheet with next month's outlook, points of contact, and table of contents.

- (2) Next month's climatology summary.
- (3) Next month's lunar data.
- (4) Next month's solar data.
- (5) Next month's wind rose.

c. Annual Weather Data (summarized by month by calendar year).

(1) Extreme heat.

(a) Number of days with maximum temperature of 90 through 99 degrees Fahrenheit.

(b) Number of days with maximum temperature above 100 degrees Fahrenheit.

(2) Extreme cold.

(a) Number of days with minimum temperature below 10 degrees Fahrenheit.

(b) Number of days with minimum temperatures of 10 through 20 degrees Fahrenheit.

(c) Number of days with minimum temperatures of 21 through 32 degrees Fahrenheit or less.

(d) Number of days with maximum temperatures of 32 degrees Fahrenheit or less.

(e) Number of days with maximum temperatures of 33 through 40 degrees Fahrenheit.

(3) Heavy rain.

(a) Number of days with a 24-hour rainfall amount equal to 0.50 through 0.99 inches.

(b) Number of days with a 24-hour rainfall of 1 inch or more.

(c) Maximum rainfall which occurred in a 24-hour period.

(4) Snow or freezing precipitation.

(a) Number of days with freezing precipitation.

(b) Number of days with snowfall of 1.0 to 1.5 inches.

(c) Number of days with snowfall greater than 1.5 inches.

(d) Maximum snowfall which occurred in a 24-hour period.

(5) Low visibility.

(a) Number of days fog restricted visibility to less than 1 mile.

(b) Number of days fog restricted visibility to 1 to 2 miles.

(6) Low flying weather. Number of days with occurrences of ceilings and/or visibilities less than 1000 feet and 3 miles.

G-2. Distribution.

a. Provide monthly summaries to any unit requesting a copy. The weather station maintains the distribution list. POC is the Admin Section at 442-3200.

b. Send annual summaries to Directorate of Public Works, Master Planning Branch (ATZR-EEP), and Directorate of Environmental Quality.

Appendix H

CLASSIFIED MATERIAL SUPPORT

H-1. This appendix delineates specific functions and responsibilities incumbent upon the Security Division, DPTM, the Directorate of Information Management, and OL-A, 3 WS pertaining to the receipt, access, storage, and destruction of classified material entrusted to OL-A, 3 WS.

H-2. OL-A, 3 WS may be the intended recipient of classified material subject to Air Force restrictions not applicable to classified material processed through DOIM Distribution Center.

H-3. This agreement does not eliminate/alleviate special Air Force or Army handling requirements.

H-4. DOIM Central Mailroom and Telecommunication Center (TCC) Operation will notify OL-A, 3 WS when classified material is received for OL-A, 3 WS.

H-5. OL-A, 3 WS will--

a. Review classified material. Make determination of Security Division, "need-to-know."

b. Inform Security Division of classified contingency taskings that affect OL-A, 3 WS.

c. Be responsible for posting changes, downgrade/declassification action, dissemination, accountability records, inspection and routine destruction of OL-A, 3 WS's, classified material.

d. Coordinate with Security Division and submit reports through Air Force channels on inquiries and investigations pertaining to security violations involving classified material entrusted to OL-A, 3 WS.

e. Sign for documents received from Air Force sources.

f. Open inner wrappers of classified material containers to ensure that no compromise of "dissemination restrictions" or "need-to-know" occurs.

g. Destroy or submit to Security Division, DPTM, for destruction classified material no longer required. A certifying official and witness are required on most Air Force destruction certificates.

H-6. Security Division, DPTM, will--

a. If requested, provide a witness to assist OL-A, 3 WS in classified material destruction.

b. Upon request, provide security related staff assistance and inspections to OL-A, 3 WS.

c. Store OL-A, 3 WS's classified material, separate from Security Division classified, in a GSA-approved safe. Provide OL-A, 3 WS access to classified when required.

Appendix I

SIGNIFICANT OPERATIONAL REPORTING SUPPORT

I-1. This appendix delineates specific functions and responsibilities for The Directorate of Plans, Training, and Mobilization (DPTM), Security Division and OL-A, 3 WS pertaining to the coordination and submission of operational reports through both Army and Air Force channels.

I-2. Security Division, DPTM, exercises staff supervision over OL-A, 3 WS and must be aware of significant events involving OL-A, 3 WS. OL-A, 3 WS is required to ensure that reports of an operational nature or significant incidents involving OL-A, 3 WS personnel, resources, weather events, or weather services are brought to the attention of proper offices through Air Force channels up to and including Joint Chief of Staff (JCS) level in a timely manner. To accomplish this, OL-A, 3 WS through Security Division, requires assistance from, and must coordinate with DPTM, Plans and Operations Division, which is the focal point for coordinating and submitting similar reports of significant operational incidents through Army channels.

I-3. This support agreement does not eliminate any other reporting or coordination requirements. This agreement encompasses only significant incidents involving OL-A, 3 WS personnel, resources, weather events, or weather services.

I-4. DPTM will--

a. Notify Security Division and OL-A, 3 WS of all significant incidents which involve OL-A, 3 WS personnel, resources, weather events or weather support.

b. When requested by OL-A, 3 WS include OL-A, 3 WS's, higher headquarters and intermediate command levels as information addresses on message reports submitted through Army channels in accordance with FORSCOM Reg 525-15 when the reports involve OL-A, 3 WS personnel, resources, weather events, or weather services.

c. Assist OL-A, 3 WS in accomplishing, through USAFACFS command and control channels, the submission of reports required.

I-5. Security Division will exercise staff supervision over OL-A, 3 WS and assist OL-A, 3 WS in accomplishing the submission of reports required.

I-6. OL-A, 3 WS will--

a. Notify Security Division, DPTM, when significant incidents involving OL-A, 3 WS personnel, resources, weather events, or weather services occur.

b. Coordinate with Security Division, DPTM, in accomplishing, through USAFACFS command and control channels, the submission of reports required.

c. Provide Security Division, DPTM, with the Air Force offices to be included as information addresses on FORSCOM Reg 525-15 message reports as needed.

Appendix J

SERIOUS INCIDENT REPORTING

J-1. This appendix delineates specific functions and responsibilities incumbent upon the Directorate of Public Safety/Law Enforcement Command (DPS/LEC), Communication, Command, and Control (CCC), and OL-A, 3 WS pertaining to serious incident reporting.

J-2. OL-A, 3 WS is required by Air Force regulations to ensure that reports of serious crime or incidents which involve OL-A, 3 WS personnel, resources, weather events, or weather services are brought to the attention of proper offices through Air Force channels. To accomplish this OL-A, 3 WS requires assistance from LEC which is the CCC focal point for coordinating and submitting similar serious incident reports through Army channels.

J-3. This support agreement does not eliminate any other reporting or coordination requirements. This agreement encompasses only serious crimes or incidents involving OL-A, 3 WS personnel, resources, weather events, or weather services.

J-4. DPS/LEC will--

a. Notify OL-A, 3 WS of significant incidents which involve weather personnel, resources, weather events or weather services.

b. Notify OL-A, 3 WS of crimes, serious incidents, incidents that may produce adverse publicity, and any other significant occurrences involving weather personnel as either perpetrator or victim.

c. Include OL-A, 3 WS's intermediate command levels and higher headquarters as information addressees on message reports submitted through Army channels when requested by OL-A, 3 WS.

d. Assist OL-A, 3 WS in accomplishing the submission of reports required through JCS Joint Reporting System.

J-5. OL-A, 3 WS will--

a. Advise the DPS/LEC when reports of significant incidents or reports of serious crimes, incidents, or occurrences involving weather personnel, resources, weather events, or weather services are required to be submitted through Air Force channels.

b. Provide the DPS/LEC with Air Force offices to be included as information addressees on messages reports.

c. Coordinate with the DPS/LEC in accomplishing the submission of reports required through the JCS Joint Reporting System.

Appendix K

PERSONNEL STATUS REPORT

K-1. This appendix delineates specific functions and responsibilities incumbent upon the Installation Safety Office and OL-A, 3 WS pertaining to weather-related injuries and OL-A, 3 WS personnel injuries.

K-2. This support agreement does not eliminate any other reporting or coordination requirements. This agreement encompasses only weather-related injuries and injuries to OL-A, 3 WS personnel.

K-3. The post safety officer will notify OL-A, 3 WS when--

a. Treatment or aid is administered to anyone on Fort Sill for a weather-related injury or ailment (i.e., frostbite, heat stroke/exhaustion).

b. Any member of OL-A, 3 WS appears as an injury statistic on the Fort Sill Hospital Admissions and Dispositions (A & D) Sheet.

c. Any member of OL-A, 3 WS has been injured.

K-4. OL-A, 3 WS will--

a. Notify the post safety officer of any injuries to OL-A, 3 WS personnel.

b. Provide the post safety officer with copies of Air Force accident or injury reports initiated by OL-A, 3 WS.

K-5. The post safety officer will conduct a ground safety survey including all OL-A, 3 WS operational areas at least once annually.

Appendix L

POINT WEATHER WARNINGS AND ADVISORIES

L-1. This appendix lists criteria and desired leadtimes for point weather warnings and advisories for Fort Sill.

L-2. Point Weather Warnings are issued by the Air Force Weather Agency for the area within 5 nautical miles of HPAAF for the following criteria.

Phenomena	Leadtime
Tornado	30 minutes
Severe Thunderstorm (winds GTE* 50 knots and/or hail GTE* 3/4")	60 minutes
Moderate Thunderstorm (winds 35-49 knots and/or hail GTE* 1/2" BLT* 3/4")	90 minutes
Very High Winds (nonconvective** winds GTE* 50 kts)	90 minutes
High Winds (winds 35-49 knots)	90 minutes
Freezing Precipitation	90 minutes
Heavy Rain (GTE* 2" in 12 hours)	90 minutes
Heavy Snow (GTE* 2" in 12 hours)	90 minutes

L-3. During established duty hours, Observed Area Weather Advisories are issued for the area within 20 nautical miles (NM) of HPAAF for the following. OL-A, 3 WS will issue an advisory for lightning within 20 NM when needed.

Phenomena
Lightning within 20 NM
Temperature GTE* 31 degrees C
Temperature LTE* M09 degrees C
Equivalent Wind Chill Temperature LTE* M01 degrees C
Equivalent Wind Chill Temperature LTE* M29 degrees C

L-4. During established duty hours, Observed Terminal Weather Advisories are issued for the area within 7NM of HPAAF for the following criteria.

- a. Surface winds GTE* 30 knots.***
- b. Gust spread GTE* 15 knots.****
- c. Visibility LTE* 2SM.****
- d. Ceiling LTE to 800 feet.****

L-5. OL-A, 3 WS will issue a warning for lightning with 7 NM of the runway.

* GTE = Greater than or equal to... LTE = Less than or equal to... BLT = But less than...

** Nonconvective = Not associated with thunderstorms

*** Disseminated in remarks of observation only (no backup calls made)

**** Disseminated to Range Control and 82d Med only

(ATZR-T)

FOR THE COMMANDER:



DAVID C. RALSTON
Colonel, FA
Chief of Staff

PHYLLIS R. BACON
Director of Information
Management

DISTRIBUTION:
Fort Sill Internet